

NPDES Program Compliance



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Section

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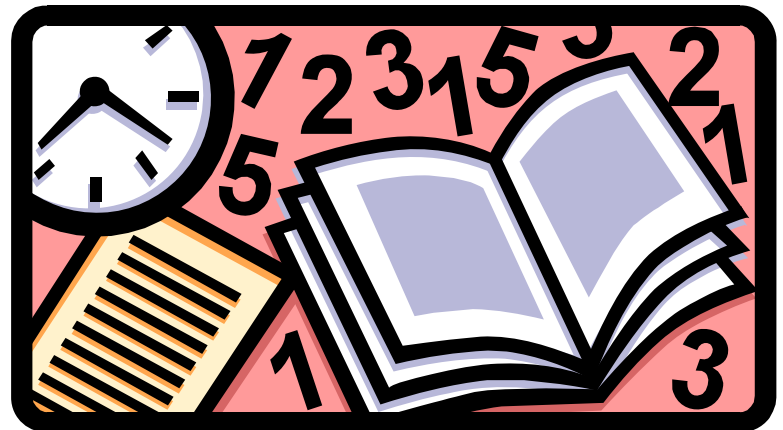


NPDES Program Compliance Overview

- NPDES Program Regulatory Sources
- Primary Objectives of NPDES Program
- Types of Inspections
- Key Areas of NPDES Program Compliance Inspections
- Common Problems

NPDES Program Regulatory Sources

- Clean Water Act
- Code of Federal Regulations
- Pollution Control Act
- State Regulations 61-9
- NPDES Permit





Primary Objectives of NPDES Program

- Establish permitting program and effluent limitations
- Ensure the proper operation and maintenance of NPDES facilities
- Ensure the accuracy and reliability of self-monitoring data



Types of Inspections

- Facility Evaluation Inspection (FEI)
- Compliance Evaluation Inspection (CEI)
- Compliance Sampling Inspection (CSI)
- Performance Audit Inspection (PAI)



Types of Inspections (cont)

- Compliance Biomonitoring Inspection
- Pretreatment Compliance Inspection/Audit
- Storm Water Compliance Evaluation



Types of Inspections

■ Facility Evaluation Inspection

- Designed to ensure facilities are properly maintained and operated in accordance with regulations.
- Brief inspection of facilities, effluent, & receiving waters. Summarize any potential compliance problems.
- Effluent samples may be collected: temperature: pH; dissolved oxygen; chlorine.
- May provide technical assistance to operators on proper operation and maintenance of facilities.
- Not limited to the check of proper operation and maintenance of the facility. It can be as in-depth as a CEI or CSI, reviewing records, collection of additional samples, laboratory check, etc.



Types of Inspections

- Compliance Evaluation Inspection
 - **Non-sampling inspection to verify compliance with permit self-monitoring requirements, effluent limits, and compliance schedules.**
 - **Involves records reviews, visual observations, and evaluation of the treatment facilities, receiving waters, and can include the laboratory.**



Types of Inspections

- Compliance Sampling Inspection
 - **Collect representative samples required by permit.**
 - **Chemical & bacteriological analyses are performed and results used to verify the accuracy of the permittee's self-monitoring program and reports; determine compliance with discharge limitations; determine the quality of effluent; and provide evidence for enforcement proceedings where appropriate.**
 - **CSI also includes same objectives and tasks as a CEI.**

Types of Inspections



- Performance Audit Inspection

- Similar to a CEI, but more in-depth review of records
- Review of Chain-of-Custodies, lab bench sheets, DMRs for each parameter
- Review of sampling procedures, flow measurement, lab analysis
- Does not include collecting samples as in CSI

Types of Inspections

- Compliance Biomonitoring Inspection (Toxicity)



- Collection of effluent samples for toxicity testing
- 3 days of composite sample collection over a week for chronic testing
- 1 grab sample collection for acute testing



Types of Inspections

- Industrial Pretreatment Compliance Inspection/Audit
 - **Conducted by Central Office (Columbia) staff**
 - **Review of POTW Pretreatment Program, Sewer Use Ordinance, enforcement actions, IU permits, reporting, etc.**
 - **Tour of POTW for any obvious signs of industrial impacts**
 - **Tour of industrial facility (IU) to observe how POTW staff conduct pretreatment inspections on their users**

Preparing for Inspection

DHEC staff will conduct in advance:

- Permit review
- Compliance history
- Notice to facility (depending on type)
- Equipment preparation





Preparing for Inspection

The Facility should expect:

- Your DHEC inspector to be courteous and professional
 - To show credentials
 - To explain the inspection process
- DHEC staff have a job to do. Doing it well means we must be thorough, knowledgeable and objective with the Permittee and facility staff.



Preparing for Inspection

The Facility should expect:

- Upon request to produce:
 - Copy of the current Facility NPDES Permit
 - O&M Records/Logs
 - Lab data (Bench Sheets/logs)
 - Sampling Chain-of-Custodies
 - Discharge Monitoring Reports (DMRs)
 - Maintenance Records
 - Calibration Records (instruments & flow meters)



Preparing for Inspection

The Facility should expect (cont):

- Upon request to:
 - Provide a plant & collection system tour
 - Identify specified sampling & flow measurement locations
 - Demonstrate SOPs/Sampling techniques
 - Solids Disposal Records & Reports
 - Discuss safety procedures & identify chemical storage facilities
 - Produce other records as appropriate (ex. Pretreatment Program, consent orders, certifications, storm water plan)
 - Assist in answering other related questions

Key Areas of NPDES Inspections

■ Permit

- Current copy of permit on site
- Name/mailing address of responsible official
- Location(s) of discharge points
- Receiving water



Compliance Schedule / Consent Order

- Facility is meeting conditions & timetable of Compliance Schedule, Administrative Order or Consent Order



Records & Reports

- Maintained > 3 years
- Operator's log
- O&M Manual, SPCC & BMP
- Noncompliance Reporting
- Sampling data
- Analytical data
- Monitoring records





Pretreatment

- Approved program
- Active permits for all IUs
- IU sampling & monitoring data
- POTW annual sampling & inspection
- Enforcing permit

Facility Site Review

- Grounds & roads maintained
- Standby power
- Alarm systems
- Cl₂ & other safety precautions



Facility Site Review (cont)

- Up-to-date operator roster
- Operator of proper grade
- Safety devices - rails, covers, etc.
- Backflow Prevention Devices



Operations & Maintenance

- All units in service or operational
- Routine & preventive maintenance performed
- Units operating properly



Flow Measurement



- Proper flow tables used
- Accuracy of flow meter
- Document in-house calibrations
- Annual full calibration
- Flume / Weir installation
- Upstream channel
- Facility flow vs. design flow



Sampling Procedures

- Proper location(s)
- Representative samples
- Grab samples > 100 mls
- DO, pH, TRC < 15 minutes
- Fecal < 6 hours
- Permit sampling date
- Sampling/analysis at required frequency

Sampling Procedures



- Flow proportional composite samples where applicable
- Refrigerated or iced sampler
- Proper preservation techniques
- Sampler tubing & container condition
- Intake header location

Sludge Handling & Disposal



- Sludge dewatering type
- Using permitted disposal site
- Proper storage & disposal of solids
- EPA 503 reporting where applicable

Laboratory

- Certified to run analyses reported
- Condition of equipment
- Calibration documentation
- Buffers & stock solution within date



Laboratory (cont)

- Calibration curve for colorimeter & other instruments
- Thermometers checked against NIST thermometer
- Thermometers tagged



Storm Water



- Storm Water Pollution Prevention Plan (SWP3) signed
- Identify responsible individuals
- Describes potential sources
- Controls in place
- SARA Title 3 requirements

Sanitary Sewer Overflows & Collection

- Map/schematics of collection system
- Inspect collection system
- Document inspections
- Overflow reports
- Maintenance records
- Complaints



Effluent

- Sample & compare to limits
- Observation of water quality for obvious problems
- Any visible negative effect on receiving waters





Common Problems Found During Inspections

- Operator of appropriate grade
- Mistakes on lab/DMR reporting
- Grab sample violations
- O&M/Housekeeping
- Security/Signage
- Odors
- Flow monitoring
- Operator Logs & Permit on-site
- Sampling in accordance with the Permit

Questions ????

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